E/ECE/324
E/ECE/TRANS/505 } Rev.1/Add.90/Amend.2

3 December 1997

AGREEMENT

CONCERNING THE ADOPTION OF UNIFORM TECHNICAL PRESCRIPTIONS FOR WHEELED VEHICLES, EQUIPMENT AND PARTS WHICH CAN BE FITTED AND/OR BE USED ON WHEELED VEHICLES AND THE CONDITIONS FOR RECIPROCAL RECOGNITION OF APPROVALS GRANTED ON THE BASIS OF THESE PRESCRIPTIONS */

(Revision 2, including the amendments entered into force on 16 October 1995)

Addendum 90: Regulation No. 91

Amendment 2

Supplement 2 to the original version of the Regulation - Date of entry into force: 21 September 1997

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF SIDE-MARKER LAMPS FOR MOTOR VEHICLES AND THEIR TRAILERS

UNITED NATIONS

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*/ Former title of the Agreement:

Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

GE.97-24820

Under Contents, "Annexes", insert two new titles to read:

"Annex 6 — Minimum requirements for conformity of production control procedures

Annex 7 — Minimum requirements for sampling by an inspector"

Paragraph 3.3., should be deleted.

Paragraph 5.4.1.1., footnote 1/, amend to read:

"1/ 1 for Germany, ... 24 (vacant), 25 for Croatia, 26 for Slovenia, 27 for Slovakia, 28 for Belarus, 29 for Estonia, 30-36 (vacant) and 37 for Turkey. Subsequent numbers ...."

Paragraph 11., amend to read:

"11. CONFORMITY OF PRODUCTION

The conformity of production procedures shall comply with those set out in the Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements:"

Paragraph 11.1., delete the second subparagraph reading: "Nevertheless, ... paragraph 7.1. above."

Paragraphs 11.2. to 11.4.5., replace by the following text:

"11.2. The minimum requirements for conformity of production control procedures set forth in annex 6 to this Regulation shall be complied with.

11.3. The minimum requirements for sampling by an inspector set forth in annex 7 to this Regulation shall be complied with.

11.4. The authority which has granted type approval may at any time verify the conformity control methods applied in each production facility. The normal frequency of these verifications shall be once every two years."

Add new Annexes 6 and 7, to read:

"Annex 6

MINIMUM REQUIREMENTS FOR CONFORMITY OF PRODUCTION CONTROL PROCEDURES

1. GENERAL

1.1. The conformity requirements shall be considered satisfied from a mechanical and geometric standpoint, if the differences do not exceed inevitable manufacturing deviations within the requirements of this Regulation.

1.2. With respect to photometric performances, the conformity of mass-produced side-marker lamps shall not be contested if, when testing photometric performances of any side-marker lamp chosen at random and equipped with a standard filament lamp, or when the side-marker lamps are equipped with non-replaceable light sources (filament lamps or other), and when all measurements are made at 6.75 V, 13.5 V or 28.0 V respectively:

1.2.1. no measured value deviates unfavourably by more than 20 per cent from the values prescribed in this Regulation.

1.2.2. If, in the case of a side-marker lamp equipped with a replaceable light source and if results of the test described above do not meet the requirements, tests on side-marker lamps shall be repeated using another standard filament lamp.

1.3. The chromaticity coordinates shall be complied with when the side-marker lamp is equipped with a standard filament lamp, or for side-marker lamps equipped with non-replaceable light sources (filament lamps or other), when the colorimetric characteristics are verified with the light source present in the side-marker lamp.

2. MINIMUM REQUIREMENTS FOR VERIFICATION OF CONFORMITY BY THE MANUFACTURER

For each type of side-marker lamp the holder of the approval mark shall carry out at least the following tests, at appropriate intervals. The tests shall be carried out in accordance with the provisions of this Regulation.

If any sampling shows non-conformity with regard to the type of test concerned, further samples shall be taken and tested. The manufacturer shall take steps to ensure the conformity of the production concerned.

2.1. Nature of tests

Tests of conformity in this Regulation shall cover the photometric and colorimetric characteristics.

2.2. Methods used in tests

2.2.1. Tests shall generally be carried out in accordance with the methods set out in this Regulation.

2.2.2. In any test of conformity carried out by the manufacturer, equivalent methods may be used with the consent of the competent authority responsible for approval tests. The manufacturer is responsible for proving that the applied methods are equivalent to those laid down in this Regulation.

2.2.3. The application of paragraphs 2.2.1. and 2.2.2. requires regular calibration of test apparatus and its correlation with measurements made by a competent authority.

2.2.4. In all cases the reference methods shall be those of this Regulation, particularly for the purpose of administrative verification and sampling.

2.3. Nature of sampling

Samples of side-marker lamps shall be selected at random from the production of a uniform batch. A uniform batch means a set of side-marker lamps of the same type, defined according to the production methods of the manufacturer.

The assessment shall in general cover series production from individual factories. However, a manufacturer may group together records concerning the same type from several factories, provided these operate under the same quality system and quality management.

2.4. Measured and recorded photometric characteristics

The sampled side-marker lamp shall be subjected to photometric measurements for the minimum values at the points listed in annex 4 and the chromaticity coordinates listed in annex 5, provided for in the Regulation.

2.5. Criteria governing acceptability

The manufacturer is responsible for carrying out a statistical study of the test results and for defining, in agreement with the competent authority, criteria governing the acceptability of his products in order to meet the specifications laid down for verification of conformity of products in paragraph 11.1. of this Regulation.

The criteria governing the acceptability shall be such that, with a confidence level of 95 per cent, the minimum probability of passing a spot check in accordance with annex 7 (first sampling) would be 0.95.

Annex 7

MINIMUM REQUIREMENTS FOR SAMPLING BY AN INSPECTOR

1 GENERAL

1.1. The conformity requirements shall be considered satisfied from a mechanical and a geometric standpoint, in accordance with the requirements of this Regulation, *if any, if the differences do not* exceed inevitable manufacturing deviations.

1.2. With respect to photometric performance, the conformity of mass-produced side-marker lamps shall not be contested if, when testing photometric performances of any side-marker lamp chosen at random and equipped with a standard filament lamp, or when the side-marker lamps are equipped with non-replaceable light sources (filament lamps or other), and when all measurements are made at 6.75 V, 13.5 V or 28.0 V respectively:

1.2.1. no measured value deviates unfavourably by more than 20 per cent from the values prescribed in this Regulation.

1.2.2. If, in the case of a side-marker lamp equipped with a replaceable light source and if results of the test described above do not meet the requirements, tests on side-marker lamps shall be repeated using another standard filament lamp.

1.2.3. Side-marker lamps with apparent defects are disregarded.

1.3. The chromaticity coordinates shall be complied with when the side-marker lamp is equipped with a standard filament lamp, or for the side-marker lamps equipped with non-replaceable light sources (filament lamps or other), when the colorimetric characteristics are verified with the light source present in the side-marker lamp.

2. FIRST SAMPLING

In the first sampling four side-marker lamps are selected at random. The first sample of two is marked A, the second sample of two is marked B.

2.1. <u>The conformity is not contested</u>

2.1.1. Following the sampling procedure shown in Figure 1 of this annex the conformity of mass-produced side-marker lamps shall not be contested if the deviation of the measured values of the side-marker lamps in the unfavourable directions are:

2.1.1.1. sample A

A1:	one side-marker lamp	0 per cent
	one side-marker lamp not more than	20 per cent
A2:	both side-marker lamps more than	0 per cent
	but not more than	20 per cent
	go to sample B	

2.1.1.2. sample B

B1:	both side-marker lamps	0 per cent

2.1.2. or, if the conditions of paragraph 1.2.2. for sample A are fulfilled.

2.2. The conformity is contested

2.2.1. Following the sampling procedure shown in Figure 1 of this annex the conformity of mass-produced side-marker lamps shall be contested and the manufacturer requested to make his production meet the requirements (alignment) if the deviations of the measured values of the side-marker lamps are:

2.2.1.1. sample A

A3:	one side-marker lamp not more than	20 per cent
	one side-marker lamp more than but not more than	20 per cent 30 per cent

2.2.1.2. sample B

B2:	in the case of A2	
	one side-marker lamp more than but not more than	0 per cent 20 per cent
	one side-marker lamp not more than	20 per cent
B3:	in the case of A2	
	one side-marker lamp	0 per cent
	one side-marker lamp more than but not more than	20 per cent 30 per cent

2.2.2. or, if the conditions of paragraph 1.2.2. for sample A are not fulfilled.

2.3. Approval withdrawn

Conformity shall be contested and paragraph 12 applied if, following the sampling procedure in Figure 1 of this annex, the deviations of the measured values of the side-marker lamps are:

2.3.1. sample A

A4:	one side-marker lamp not more than	20 per cent
	one side-marker lamp more than	30 per cent
A5:	both side-marker lamps more than	20 per cent

2.3.2. sample B

B4:	in the case of A2	
	one side-marker lamp more than but not more than	0 per cent 20 per cent
	one side-marker lamp more than	20 per cent
B5:	in the case of A2	
	both side-marker lamps more than	20 per cent

B6: in the case of A2
one side-marker lamp 0 per cent
one side-marker lamp more than 30 per cent

3.3.3. or, if the conditions of paragraph 1.2.2. for samples A and B are not fulfilled.

3. REPEATED SAMPLING

In the cases of A3, B2, B3 a repeated sampling, third sample C of two side-marker lamps and fourth sample D of two side-marker lamps, selected from stock manufactured after alignment, is necessary within two months' time after the notification.

4.1. The conformity is not contested

4.1.1. Following the sampling procedure shown in Figure 1 of this annex the conformity of mass-produced side-marker lamps shall not be contested if the deviations of the measured values of the side-marker lamps are:

4.1.1.1. sample C

C1: one side-marker lamp 0 per cent
one side-marker lamp not more than 20 per cent

C2: both side-marker lamps more than 0 per cent
but not more than 20 per cent
go to sample D

4.1.1.2. sample D

D1: in the case of C2
both side-marker lamps 0 per cent

4.1.2. or, if the conditions of paragraph 1.2.2. for sample C are fulfilled.

4.2. The conformity is contested

4.2.1. Following the sampling procedure shown in Figure 1 of this annex the conformity of mass-produced side-marker lamps shall be contested and the manufacturer requested to make his production meet the requirements (alignment) if the deviations of the measured values of the side-marker lamps are:

4.2.1.1. sample D

D2: in the case of C2
one side-marker lamp more than 0 per cent
but not more than 20 per cent
one side-marker lamp not more than 20 per cent

3.2.1.2. or, if the conditions of paragraph 1.2.2. for sample C are not fulfilled.

3.3. Approval withdrawn

Conformity shall be contested and paragraph 12 applied if, following the sampling procedure in Figure 1 of this annex, the deviations of the measured values of the side-marker lamps are:

3.3.1. sample C

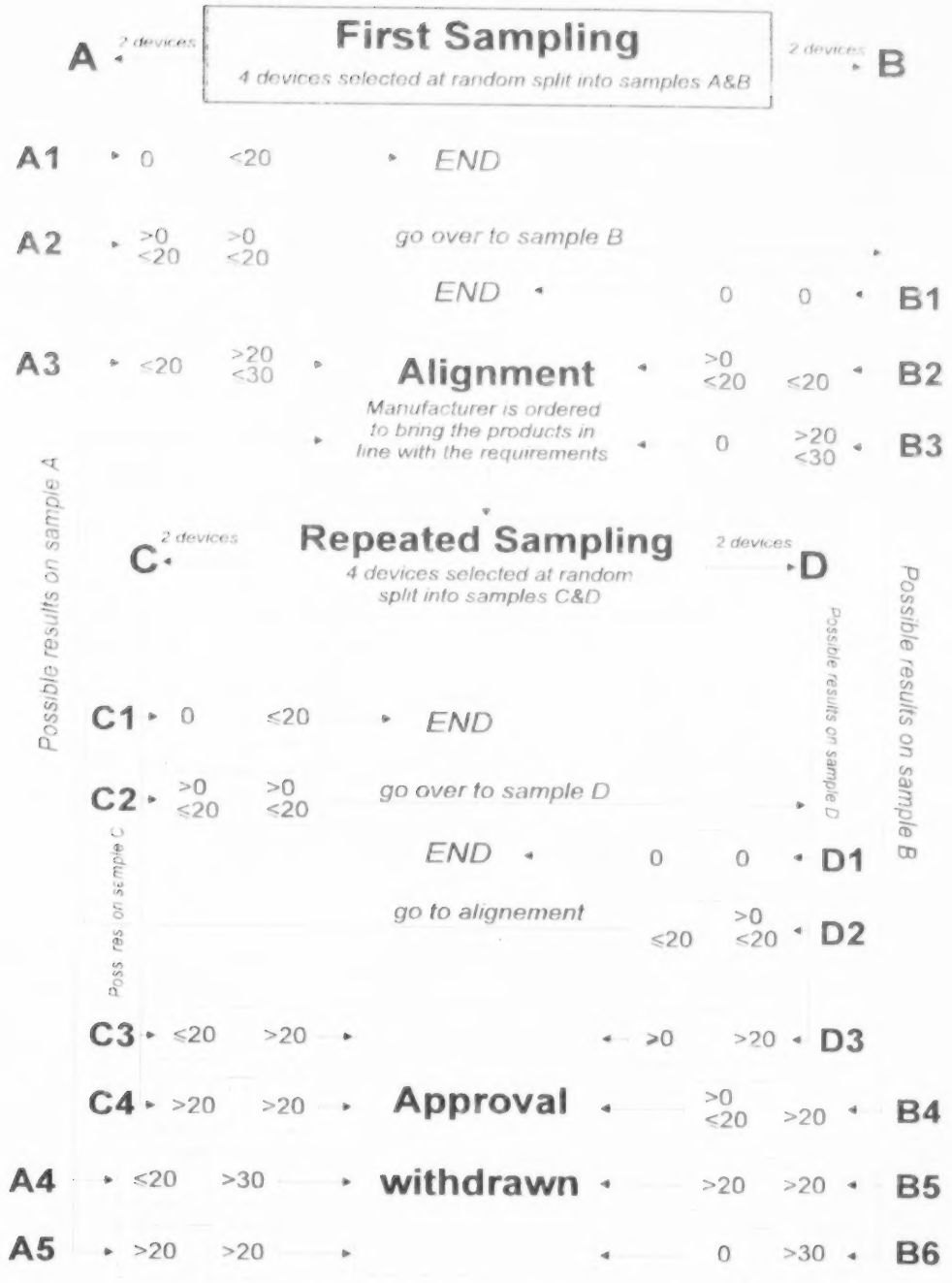
C3:	one side-marker lamp not more than	20 per cent
	one side-marker lamp more than	20 per cent
C4:	both side-marker lamps more than	20 per cent

3.3.2. sample D

D3:	in the case of C2	
	one side-marker lamp 0 or more than	0 per cent
	one side-marker lamp more than	20 per cent

3.3.3. or, if the conditions of paragraph 1.2.2. for samples C and D are not fulfilled.

Figure 1


A
2 devices
First Sampling
4 devices selected at random split into samples A&B
2 devices
B
A1
0
<20
END
A2
>0 <20
>0 <20
go over to sample B
END
0
0
B1
A3
≤20
>20 ≤30
Alignment
Manufacturer is ordered to bring the products in line with the requirements
>0 ≤20
≤20
B2
0
>20 ≤30
B3
Possible results on sample A
C
2 devices
Repeated Sampling
4 devices selected at random split into samples C&D
2 devices
D
Possible results on sample D
Possible results on sample B
C1
0
≤20
END
C2
>0 ≤20
>0 ≤20
go over to sample D
END
0
0
D1
go to alignement
≤20
>0 ≤20
D2
Poss res on sample C
C3
≤20
>20
>0
>20
D3
C4
>20
>20
Approval
>0 ≤20
>20
B4
A4
≤20
>30
withdrawn
>20
>20
B5
A5
>20
>20
0
>30
B6
X
Maximum deviation [%] in the unfavourable direction in relation to the limit values

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